



National Transportation Safety Board

Safety Alert:
“Reduced Visual References
Require Vigilance”



National Transportation Safety Board



CFIT Accident: VFR into IMC

Chris Shaver (presenter)
Van McKenny, IIC

Accident Flight

- Aero Commander 680FL
- Mountainous terrain, daylight IMC
- Pilot was fatally injured
- Part 91, no flight plan
- Returning airplane to base after previous weather diversion

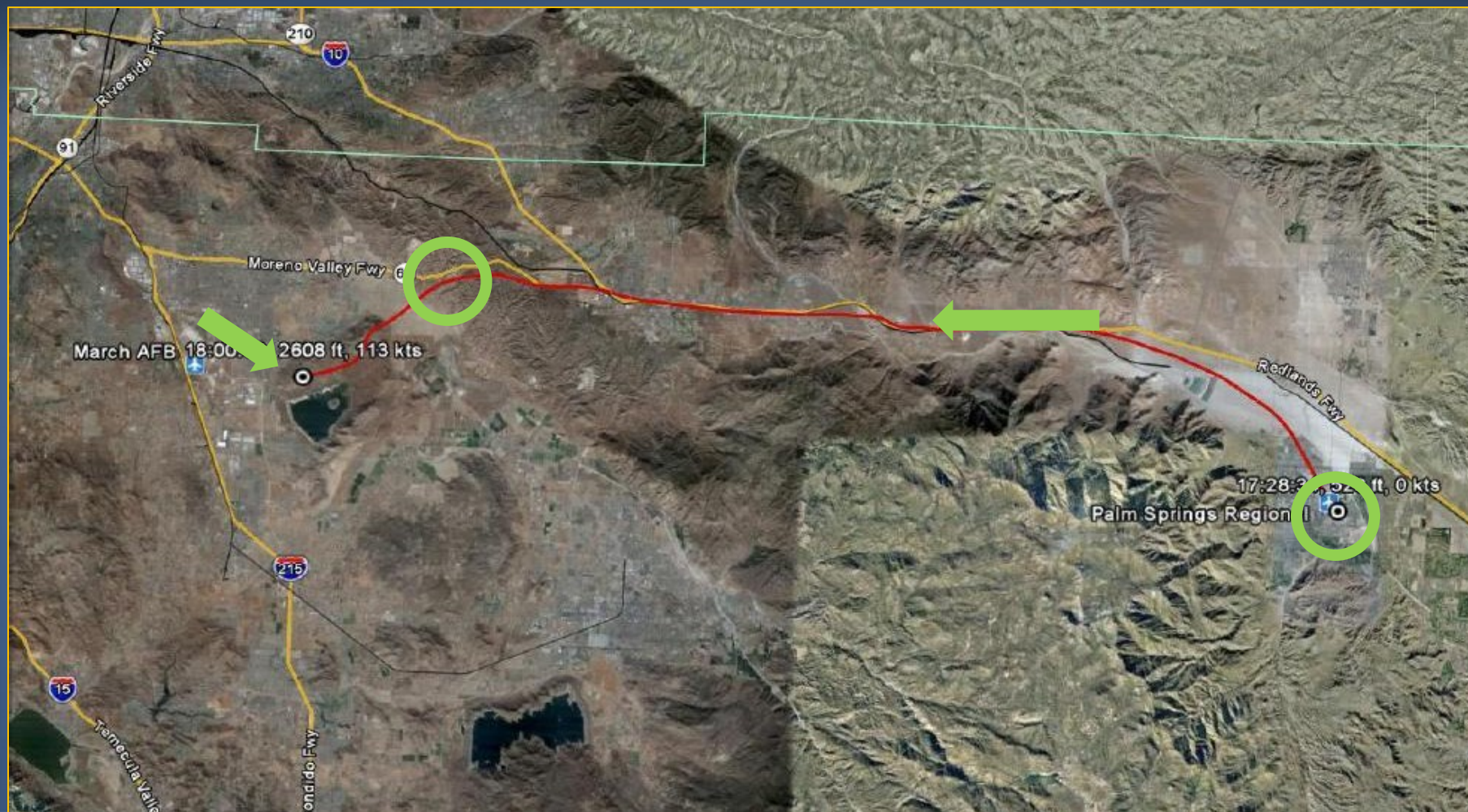
Pilot

- 33,000+ total flight hours
- Instrument current
- Recent experience in accident airplane

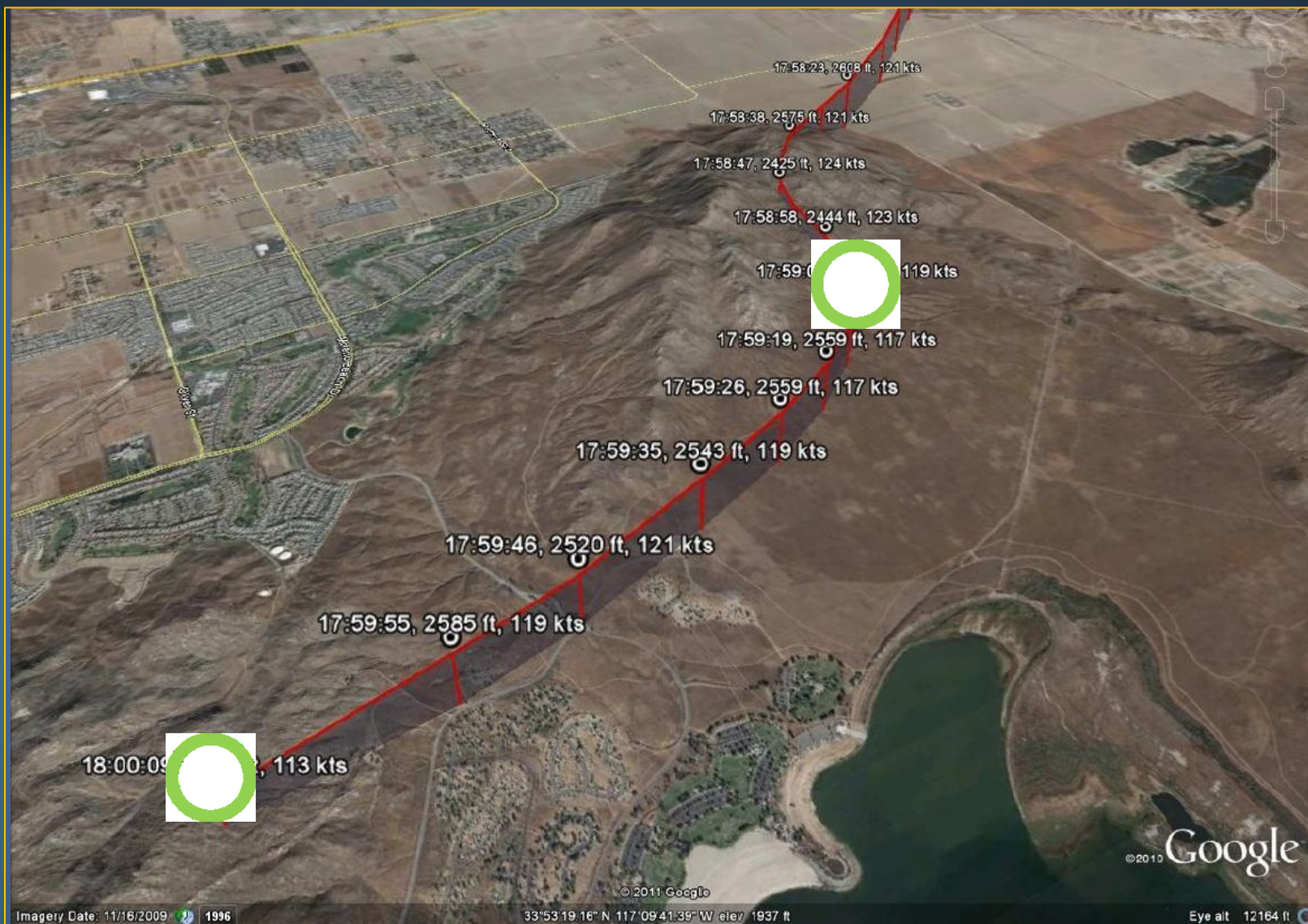
Weather

- No record of a weather briefing
- Departure: VFR
- En route: marginal VFR
- Precipitation in area of accident

Accident Flight



Accident Flight



Accident Site



Missed Opportunities

- Obtain a weather briefing
- Adhere to cancellation alternatives
- Resist external pressures to complete flight
- Act before situation becomes dangerous

ASI Perspectives

- Make the right decisions at the right time
- If there's doubt, reevaluate
- Never “go take a look”
- You never have to be anywhere when flying an airplane



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Spatial Disorientation
Accident:

Dark Night VMC

Dennis J. Diaz, IIC

Accident Flight

- Cessna 182S
- Dark night VMC
- Pilot and passenger were returning home
- Radio contact lost about 25 minutes into flight

Meridian

Erwin

Columbus

Lost Comm



13

143 mi

Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Image © 2013 TerraMetrics

Google earth



Erwin

**End of Civil
Twilight**

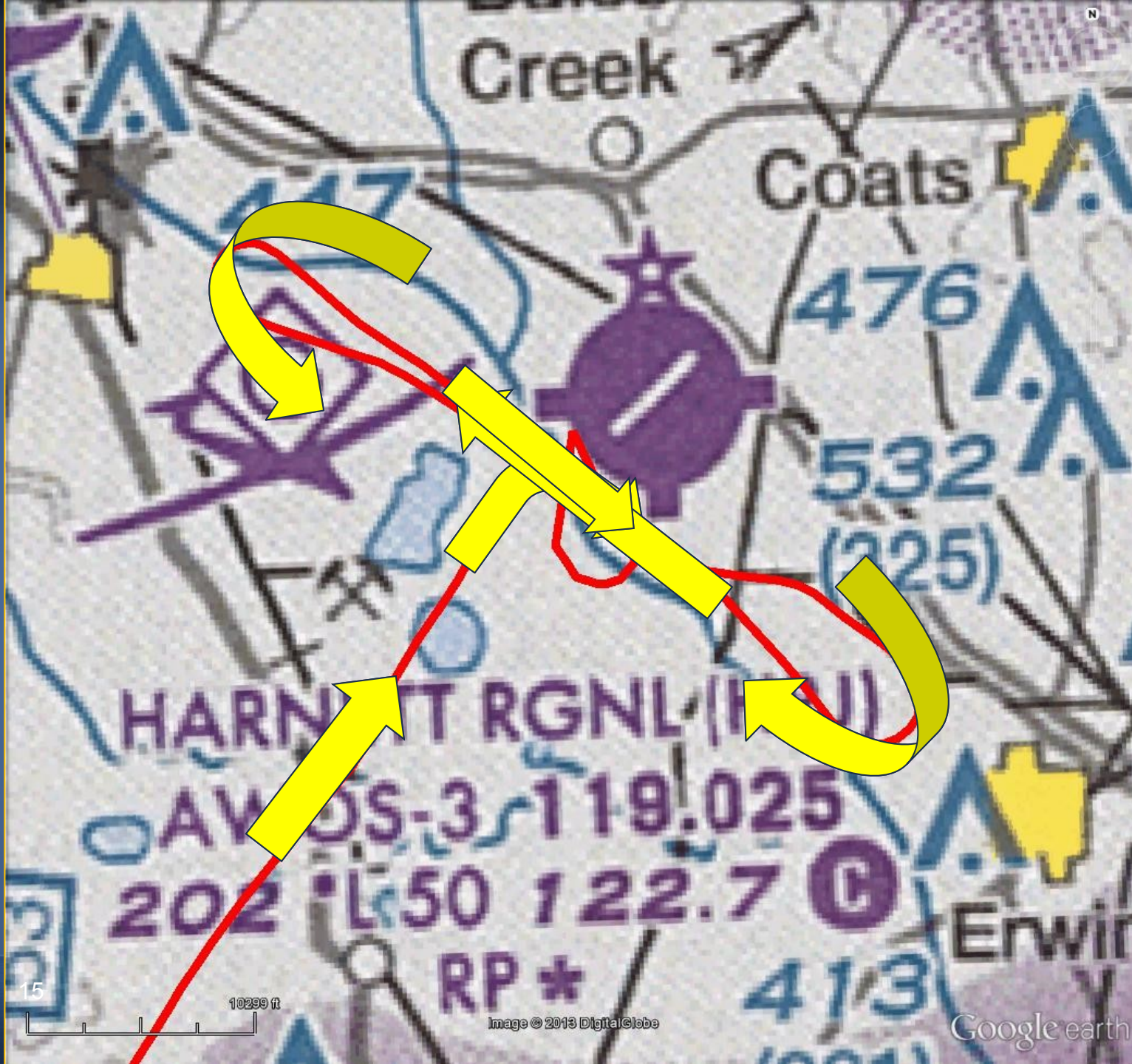
14

143 mi

Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Image © 2013 TerraMetrics

Google earth



Runway 5



16 2415 ft

Google earth

Accident Site



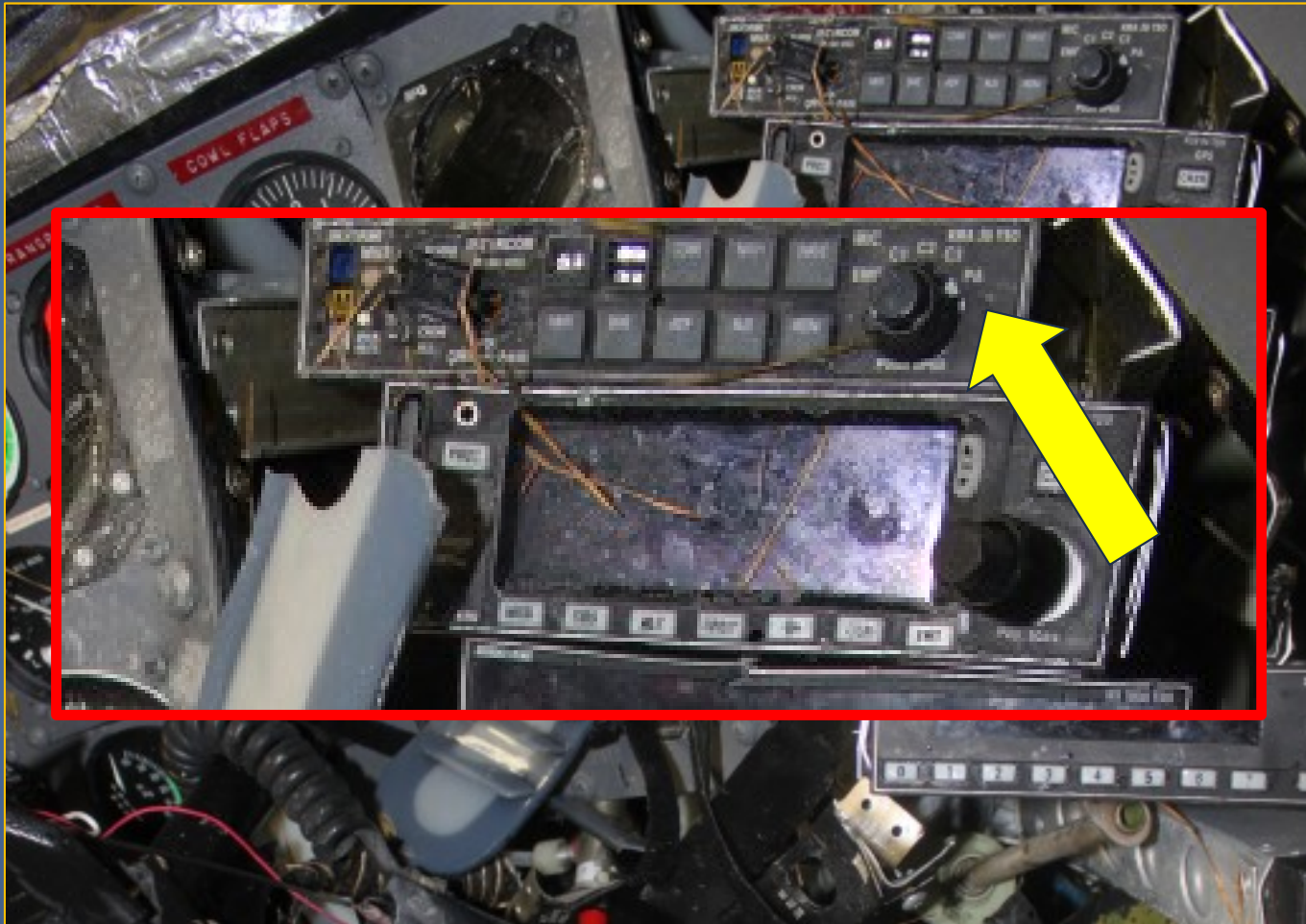
Accident Site



Pilot Experience

- No flights logged within 8 months of accident flight
- No recent flight review or instrument proficiency check
- Only 0.2 hours of night experience in last year

Audio Panel



Missed Opportunities

- Fully understand how to operate all onboard systems
- Divert flight after encountering abnormalities
- Terminate flight before nightfall
- Find airport with continuous night lighting, without disorientation hazard

ASI Perspectives

- Balance risk vs. practicality
- Reduced visibility accidents are:
 - Often fatal
 - Easily preventable
- No pilot is immune



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Spatial Disorientation Accident

Elliott Simpson, IIC

Accident Flight

- Experimental-AB Vans RV-10
- Seale, Alabama
- Lebanon, Tennessee, to Eufaula, Alabama
- Pilot and passenger/builder fatally injured

Accident Flight

- Airplane equipped with “glass cockpit” flight instruments
- Cross country flight to Sun ‘n Fun
- Approach flown in daylight IMC
- IFR flight plan

Pilot

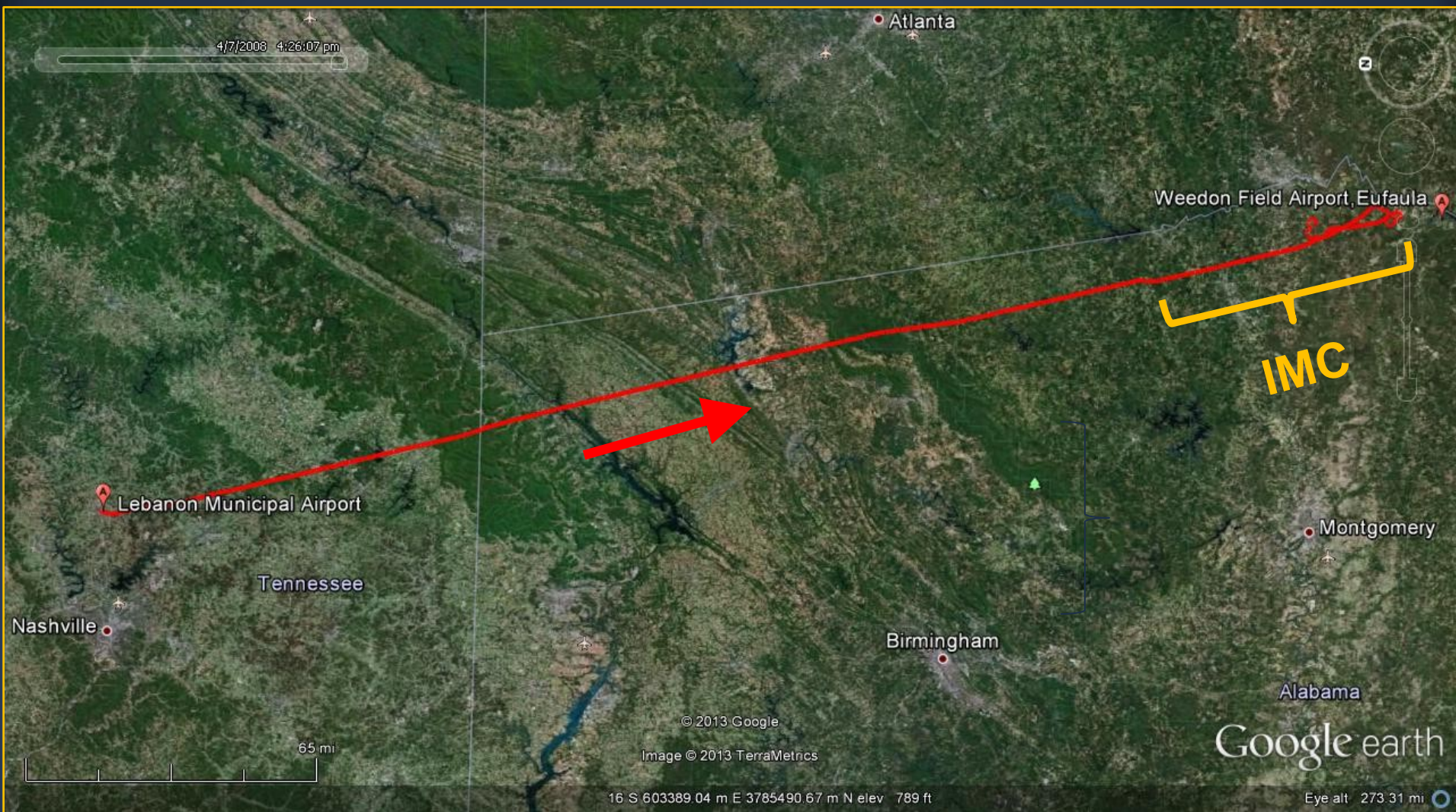
- 1,700 total flight hours
- Instrument current, 358 flight hours in actual IMC
- Majority of prior IFR experience in personal airplane, equipped with “conventional” instruments
- No flight experience in the accident airplane or type

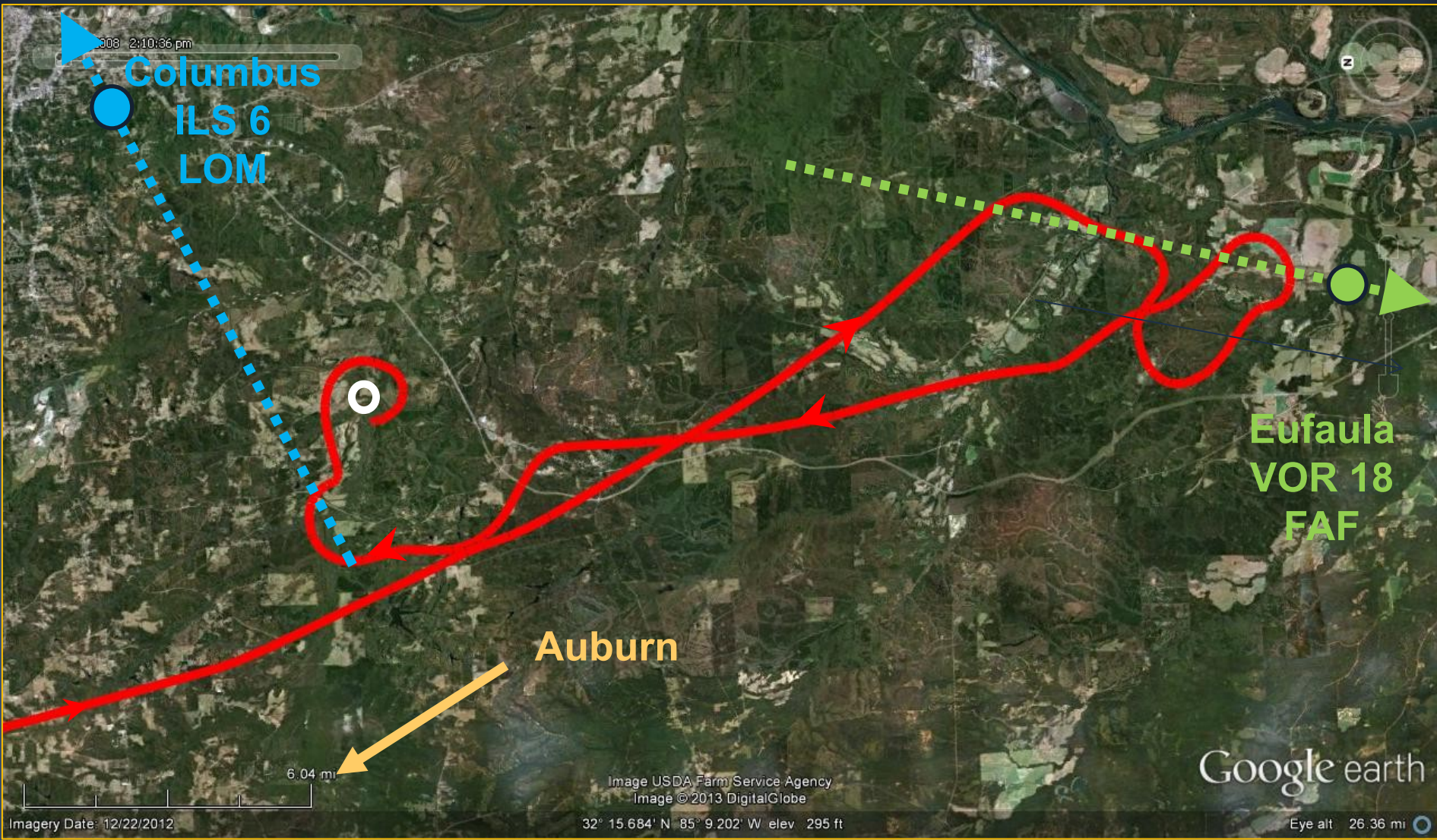
Pilot-Rated Passenger

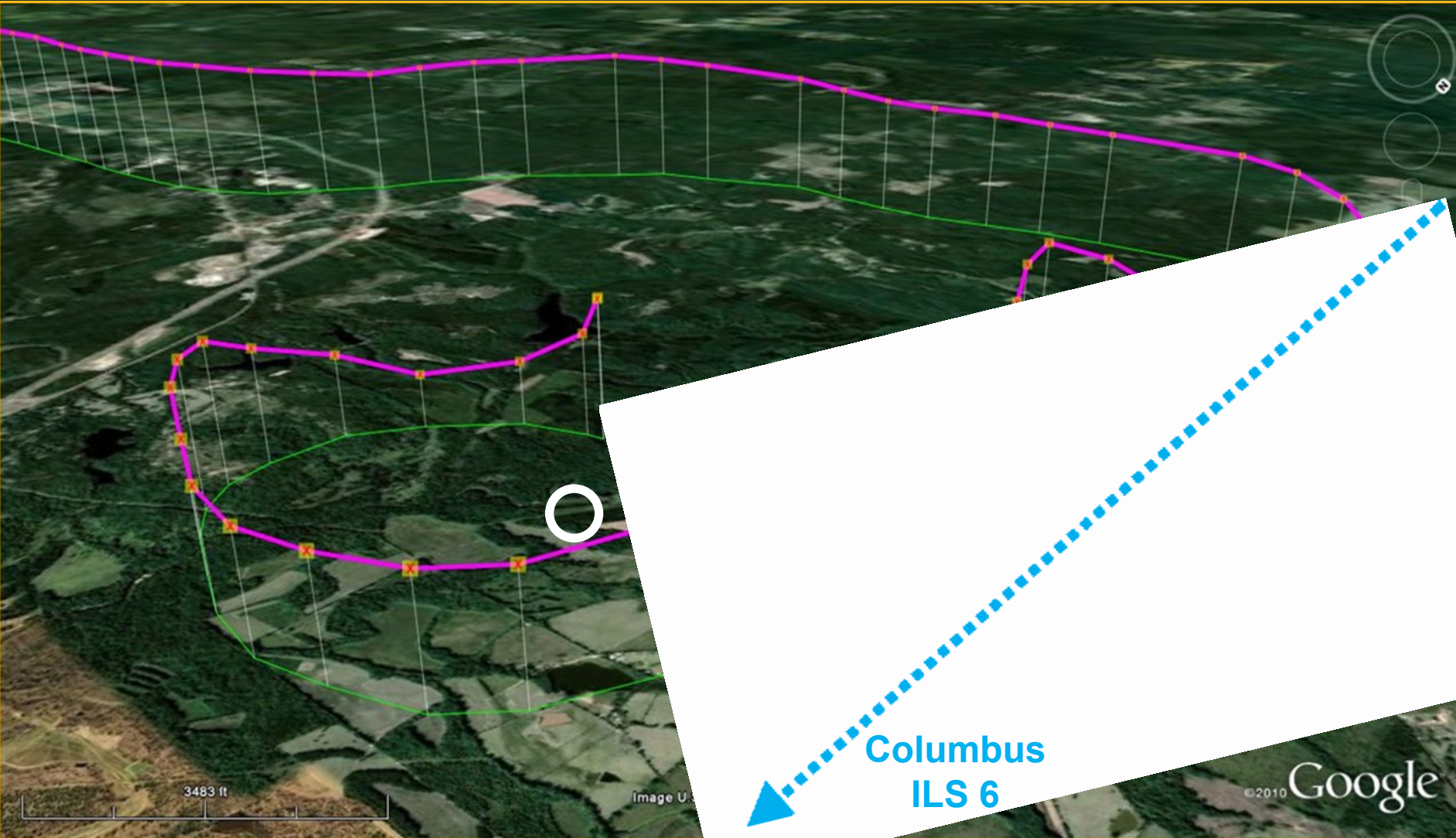
- Private pilot, no instrument rating
- 68 flight hours in accident airplane
- Co-builder of accident airplane

Weather

- Departure and en route: VMC
- Arrival area weather
 - 8 miles visibility
 - 1,000-foot ceiling
 - 4,500-foot cloud tops









Missed Opportunities

- Declare an emergency
- Utilize ATC - additional resources will become available if emergency declared
- Climb into VMC
- Glass cockpit training

ASI Perspectives

- Pilot-rated passenger familiar with the airplane, but would not have been familiar with flying an instrument approach
- Flight “legal,” but may not necessarily be advisable
- Glass cockpit does not guarantee additional levels of safety
- Read and learn from NTSB reports

Summary

Safety Alert: “Reduced Visual References Require Vigilance”

- Accident summaries
- Links to educational resources
- “What can pilots do?”

What can pilots do?

- Obtain weather briefing
- Don't allow situation to become dangerous before acting
- Ask for help from ATC

What can pilots do?

- Prepare for the challenges of night flight
- Be honest about skill limitations
- Plan ahead with alternatives

What can pilots do?

- Understand how to use all aircraft systems
- Manage distractions



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